

REMARKS

Claims 1-23 were pending in this application, all of which have been amended except for claim 11 that has been canceled. Claim 24 is added. Thus, claims 1-10 and 12-24 stand for consideration in this application.

The amendment to claim 2 is supported in the second full paragraph on page 4 of the specification.

The amendment to claim 3 is supported in the third and fourth full paragraphs on page 4 and also in the last full paragraph on page 23, in which the typographic error “dumped” is corrected to “damped.” The amendment of “dumped” to “damped” is supported at on page 4, stating that transmission of vibrations is preventing (i.e., “damped”).

New claim 24 is supported in the drawing and specification.

In response to the official action:

[1] The Examiner objected to the drawing as not showing the claimed “hold portion.”

This rejection is respectfully traversed for the record, and the amendment to the specification, discussed below, is believed to render the drawing objection moot.

[2-4] The disclosure and claims were objected to on the basis of informalities.

Correction is made, and withdrawal of the objection is requested.

[5-6] Claims 21-22 are rejected under 35 U.S.C. §112, first paragraph, for “hold portion.”

The Examiner asserts that the claimed “hold portion” is not enabled. The “hold portion” was not mentioned in the Detailed Description and no number was associated with it. On the other hand, the Summary did mention the hold portion in the 5th and 6th paragraphs on page 6, reciting “a maintenance cover ... detachably mounted at a maintenance opening [and] a harness of a sensor attached to the case member is integral with the maintenance cover. ... the hold portion for holding the harness of the sensor is integrally formed on the maintenance cover.”

Meanwhile, the Detailed Description at page 29 described a maintenance cover 61 over a maintenance opening 26, with a mount hole 63 on a binder mount portion 62 of the cover 61 (Figs. 33-34), and a nylon binder 65 (Figs. 36-39) that is detachably fitted to the mount hole 63. The binder wraps up a harness 60, in the manner of a nylon cable tie.

Thus, the binder mount portion 62 corresponds to the claimed hold portion, because it is “integrally formed on the maintenance cover.” This accords with claims 21 and 22 also.

The specification at page 29, line 2, is now amended to recite “a binder mount portion or hold portion 62.” Withdrawal of the rejection is requested.

[8-11] Claims 11, 19, and 22 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite.

The claims are amended. Withdrawal of the rejection is requested.

[12-13] Claims 1, 4-8, 11-14, and 16-19 are rejected under 35 U.S.C. §102 as being anticipated by MacAfee (U.S. Patent 4,108,021).

Claim 1 recites

...

at least one projecting portion formed on one or both of an inner surface of the case member and the outer wall surface of the device body to make an additional contact between said case member and said device body;

a seal member at a second contact surface located at a distal end of said projecting portion.

which is exemplified (in a first embodiment) by projection 41g and cured liquid 44 in the Applicants' Figs. 13-15, and which is further described in **amended claim 2** (rejection discussed below); which is also exemplified (in a second embodiment) by projection 41f and resilient rubber 58 in the Applicants' Figs. 10-12, and which is further described in **amended claim 3** (rejection discussed below). The features of **claims 4 and 5** is employed in these embodiments. The resulting reduction in vibration is set out in the paragraph starting at the bottom of page 23,

With respect, MacAfee does not disclose the features of claim 1:

First, in claim 1 the two phrases “a case member” and “a device body” imply two *different* parts, but MacAfee's transfer case comprises two *identical* parts (Abstract, line 2 and col. 1, lines 49-50). New claim 24 recites that the case member is not identical to the device body, and further distinguishes over MacAfee.

Second, MacAfee does not disclose a “projecting portion [making] contact” between the case member and the device body. The Examiner applies features 20, 140, and 134 of Fig. 6 to anticipate the claimed projecting portion. However, 20 and 134, if they were to anticipate anything, clearly would anticipate the “outer circumferential portion fastened to said ... outer wall surface of said device body” by fasteners, which is recited as a feature distinct from the projecting portion.

The other applied feature, shaft boss 140, is in fact away from the circumferential portion (lower left in MacAfee's Fig. 1). However, it does not contact the other half of the casing; instead, it contacts a hub 110 (left) or 95 (right), as shown in Fig. 1. Even if the other half were a “device body” (not admitted), there still in no contact with it.

Third, the claimed seal member at a distal end of the projection portion is lacking. The Examiner cites gasket 28 of MacAfee (shown in Fig. 1), which is between the *outer edges* of the two identical case members, and cannot correspond to the claimed seal member at the end of the projection.¹ The gasket 94, that encircles the shaft 37 in Fig. 1), is also not a seal member at the end of a projection, does not act to attach the case member to the outer surface of the device body. It is noted that Fig. 4 shows only external gaskets (see arrows 4-4 in Fig. 2).

The rejection of **claim 4** is respectfully submitted to be incorrect because, even if feature 140 of MacAfee's Fig. 6 did anticipate the claimed projections (not admitted), it is below the plane of the outer wall.

¹ Claim 1 recites “a *first* contact between a contact surface of the outer circumferential portion of the case member and an outer wall surface of said device body ... [a] projecting portion formed on ... an inner surface ... to make an *additional* contact between said case member and said device body.”

The rejection of **independent claim 8** is respectfully disagrees with because no seal at the contact portion of the projection portion is disclosed by MacAfee and no internal combustion engine is disclosed by MacAfee.

Independent claim 16 is not anticipated because MacAfee does not disclose the claimed polygonal sections with straight sides, nor the other newly-claimed feature that the depressed planes and projecting planes are adjacent to each other. Also, there is no internal combustion engine in the applied reference.

The holes located on extension lines, recited in **claim 17**, are also not disclosed. There is believed to be no definable extension to a *curved* line, and no straight line is disclosed.

[14] Claims 20 and 23 are rejected under 35 U.S.C. §102 as being anticipated by Daihatsu (JP 08061111 A).

This rejection is respectfully traversed. Claim 20 is exemplified by Figs. 32-33. Fig. 33 shows a mount portion 62 which is integral with a maintenance cover 61, and Fig. 32 shows a harness 60 of a sensor 28 attached to the mount portion 62.

In contrast, Daihatsu discloses that the harness mates *directly* with the connector 6 ("the ... end of this coupling part is in contact with the sensor through wire harness," Basic Abstract). There is no mounting structure at all. Withdrawal of the rejection is requested.

[15-16] Claims 2, 3, 9, and 10 are rejected under 35 U.S.C. §103 as being unpatentable over MacAfee in view of Akatsu, (JP 410299500 A).

MacAfee's two casing halves, which are identical (as noted above) have identical grooves to each hold one half of the edge seal 28. In contrast to the seal 44 of Applicants' Fig. 15, which can cure in a well, no liquid could cure in MacAfee's grooves. Therefore, MacAfee teaches against liquid and against **claims 2 and 9**. The other seals (e.g., 94) are for the rotating parts and are equally inapplicable.

Claim 3 and 10 are also not anticipated because there are no distal ends of said projecting portions that “make an additional contact” between the casing halves (as noted above), and there are no seals at the ends of any of the bosses, such as 140.

This rejection is respectfully traversed on the grounds that MacAfee expresses no need for the solid or liquid seals of Akatsu, and the rejection presents no motivation for combining the references, contrary to MPEP 2142.

[17] Claim 15 is rejected under 35 U.S.C. §103 as being unpatentable over MacAfee in view of Hashimoto (U.S. Patent 4,977,870).

With respect, Hashimoto is not applicable. The asserted oil injection hole 46 is referred to by Hashimoto itself as an “oil pump chamber 46” (col 3, line 65) that contains gears 42 and 43. Nothing resembling the oil injection hole exemplified by hole 59 in instant Fig. 9 is seen in Hashimoto.

In view of the aforementioned amendments and accompanying remarks, the claims are believed to be in condition for allowance. Withdrawal of the rejection and allowance of all claims is requested.

Attached hereto is a marked-up version of the changes made by the current amendment. The attached page is captioned, "VERSION WITH MARKINGS TO SHOW CHANGES MADE".

In the event this paper is not timely filed, then this paper is a petition for an appropriate extension of time. The fees for such an extension or any other fees which may be due with respect to this paper may be charged to Deposit Account No. 01-2340. Favorable consideration and allowance are respectfully solicited.

Respectfully submitted,

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Enclosure: Version With Markings to Show Changes

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VERSION OF WITH MARKINGS TO SHOW CHANGES

IN THE CLAIMS

1. (Amended) A case member mounting structure [characterized in that] comprising
a case member fitted onto a device body,

[at least one projecting portion is formed on one or both of an inner surface of a case member and an outer wall surface of a device body to contact said inner wall surface of said case member having]

an outer circumferential portion of the case member being fastened to said device body by a plurality of [fastening means and to] fasteners,

the case member and the device body making a first contact [said] between a contact surface of the outer circumferential portion of the case member and an outer wall surface of said device body on which said case member is fitted; [to be fastened, and]

at least one projecting portion formed on one or both of an inner surface of the case member and the outer wall surface of the device body to make an additional contact between said case member and said device body;

a seal member [is provided on a] at a second contact surface located at a distal end of said projecting portion.

2. (Amended) [A] The case member mounting structure according to claim 1 wherein said seal member is a liquid seal member coated on at least one of contact surfaces at distal ends of said projecting portions, whereby rigidity of the case member is increased and vibrations of the case member are suppressed.

3. (Amended) [A] The case member mounting structure according to claim 1 wherein said seal member is a resilient seal member which is brought into engagement with an engaging portion provided in at least one of contact surfaces at distal ends of said projecting portions, whereby the case member and the device body are elastically coupled, and vibrations of the case member are damped by the resilient member.

4. (Amended) [A] The case member mounting structure according to claim 1 wherein said contact surfaces of said distal ends of said projecting portions lie on a common plane to said outer wall surface of said device body, or to said inner wall surface of said case member to be fastened to said device body.

5. (Amended) [A] The case member mounting structure according to claim 1 wherein said contact surfaces of the distal ends of said projecting portions lie on a plane different from the plane of said outer wall surface of said device body, or from the plane of said inner wall surface of said case member to be fastened to said device body.

6. (Amended) [A] The case member mounting structure according to claim 1 wherein at [leas] least one projecting portion projects from one of said inner surface of said case member and said outer wall surface of said device body toward the other.

7. (Amended) [A] The case member mounting structure according to claim 1 wherein a surface of said case member is partitioned into polygonal sections, and respective said polygonal sections define depressed planes and projecting planes bordered by respective sides of the polygons.

8. (Amended) A case member mounting structure [characterized in that] comprising
a case member, for covering a driving force transmission mechanism, fitted onto a body
of an internal combustion engine,

[at least one projecting portion is formed on one or both of an inner surface of a case member for covering a driving force transmission mechanism and an outer wall surface of a body of an internal combustion engine to contact said inner wall surface of said case member having]

an outer circumferential portion of the case member being fastened to said body by a plurality of [fastening means and to] fasteners,

the case member and the body making a first contact [said] between a contact surface of the outer circumferential portion of the case member and an outer wall surface of said body on which said case member is fitted; [to be fastened, and]

at least one projecting portion formed on one or both of an inner surface of the case member and the outer wall surface of the body to make an additional contact between said case member and said body;

a seal member [is provided on a] at a second contact surface located at a distal end of said projecting portion.

9. (Amended) [A] The case member mounting structure according to claim 8 wherein said seal member is a liquid seal member coated on at least one of contact surfaces at distal ends of said projecting portions.

10. (Amended) [A] The case member mounting structure according to claim 8 wherein said seal member is a resilient seal member which is brought into engagement with an engaging portion provided in at least one of contact surfaces at distal ends of said projecting portions.

12. (Amended) [A] The case member mounting structure according to claim 8 wherein said contact surfaces of said distal ends of said projecting portions lie on a common plane to said outer wall surface of said body, or to said inner wall surface of said case member to be fastened to said body.

13. (Amended) [A] The case member mounting structure according to claim 8 wherein said contact surfaces of the distal ends of said projecting portions lie on a plane different from the plane of said outer wall surface of said body, or from the plane of said inner wall surface of said case member to be fastened to said body.

14. (Amended) [A] The case member mounting structure according to claim 8 wherein at least one projecting portion projects from one of said inner surface of said case member and said outer wall surface of said body toward the other.

15. (Amended) [A] The case member mounting structure according to claim 8 wherein at least one of said projecting portions has a lubricant oil injection hole.

16. (Amended) A case member mounting structure [having] comprising a plurality of fastening bolt bosses formed along an outer circumference of a case member for applying a plurality of fastening bolts, respectively, such that said case member is attached to a device body or a body of an internal combustion engine with said fastening bolts, [characterized in that]

wherein the surface of said case member is partitioned into polygonal sections, and respective said polygonal sections define depressed planes and projecting planes bordered by respective sides of the polygons; and

wherein sides of the polygonal sections are straight, and

the depressed planes and projecting planes are adjacent to each other.

17. (Amended) [A] The case member mounting structure according to claim 15 wherein said fastening bolt bosses are located on extension lines of respective sides of the polygons.

18. (Amended) [A] The case member mounting structure according to claim 16 wherein said case member has ribs at the same positions [of] on inner and outer surfaces thereof, and said ribs partition said inner and outer surfaces of said case member into polygonal sections.

19. (Amended) [A] The case member mounting structure according to claim 16, comprising a first seal member on a contact surface at a distal ends of said fastening bolt bosses, and wherein said first seal member is of [the] a same type as a second seal member applied along [said] outer circumference with which said case member and said device body or said body of an internal combustion engine are fastened together.

20. (Amended) A case member for covering a driving force transmission mechanism of an internal combustion engine, comprising [characterized in that] a maintenance cover [is provided to be] detachably mounted at a maintenance opening formed in said driving force transmission mechanism, said maintenance cover comprising a mount portion, and [that] a harness of a sensor attached to said case member that is integral with said maintenance cover.

21. (Amended) [A] The case member according to claim 20 wherein a hold portion of said maintenance cover is formed along a surface which inclines from an outer circumferential portion of said maintenance cover toward a side surface of said cover.

22. (Amended) [A] The case member according to claim 20 wherein said sensor is a detecting sensor for detecting rotation of a rotary shaft, and said sensor being mounted to orient toward a mounting position of said maintenance cover to said case member of said driving force transmission mechanism, and said harness of said detecting sensor being mounted on [said] a hold portion.

IN THE SPECIFICATION

Amend the paragraph starting at page 3, last line:

Additionally, unlike the boss portions of the aforementioned conventional technique, which are required to have a diameter greater than the maximum outer diameter of bolts to enable holes to be made for receiving the bolts therethrough or therein, even in case there is no allowance in the space defined between the engine case member and the engine body due to the existence of members disposed in that space, the projecting portions have a larger freedom in shape and size, such as being configured as elongated ribs, and are reduced in restrictions regarding their positional relation. Therefore, the projecting portions can be made in effective locations from the viewpoint of preventing vibrations and noises without disturbing the function of the engine.

Amend the paragraph starting at page 4, line 12:

The seam member may be a liquid seal member coated on one or [each] both of contact surfaces at distal ends of the projecting portions.

Amend the paragraph starting at page 7, line 12:

With this structure, length of the harness from the detecting sensor to the hold portion can be reduced, and the harness hold portion can be reduced in number. Additionally, fluctuation in mounting position [o] of the detecting sensor due to vibrations of the harness and abnormal noises can be prevented.

Amend the paragraph starting at page 23, sixth line from the bottom:

In this embodiment, vibrations of the central portion of the timing cover 5 are [dumped] damped by the resilient rubber 58, and transmission of vibrations of the central portion of the timing cover 5 to the projecting portion 40e of the cylinder block 2, cylinder head 3 and crank case 4 is alleviated significantly.

Amend the paragraph starting at page 28, last line:

Then, as shown in Fig. 34, a maintenance cover 61 closing the maintenance opening 26 of the timing cover 5 is configured to define a curved plane bulging outward, and a binder mount portion or hold portion 62 is formed at an upper, outer side edge of the maintenance cover 61. The binder mount portion 62A has formed a mount hole 63 and it is bent by approximately 45 degrees toward the timing cover 5.